deeble institute issues brief
Deeble Institute for Health Policy Research

no: 33
date: 25/10/19

title

Reforming for value: Opportunities for outcome-focused national health policy

author

Dr Kate Raymond
Director
Value Based Health Care
Dental Health Services Victoria
Email: kate.raymond@dhsv.org.au

dental health services victoria
oral health for better health

This paper was developed as part of a Deeble Institute for Health Policy Research Summer Scholarship. Dental Health Services Victoria is proud to support this scholarship.

Contents

Key messages 4

Executive summary 5

1 Background 6

1.1 Health disparities in Australia 6

1.2 Health policy in Australia 7

1.3 Reforming for equity 8

1.4 Policy levers 9

1.5 National agenda for activity-based funding 9

1.6 Data to support activity-based funding 10

1.7 Activity-based funding and equity 10

1.8 The problem of volume 10

2 Reforming for value 12

2.1 Moving governance from volume to value 12

2.2 Value-based healthcare 12

2.3 Principles of value-based healthcare policy 13

2.4 Opportunities for governance reform 13

2.5 Creating a value-based policy culture 14

3 Developing value-based healthcare policy metrics 15

3.1 Measuring for value 15

3.2 Improving policy metrics and data systems for health outcomes 15

3.2.1 Clinical quality registries 16

3.2.2 National Integrated Health Services Information (NIHSI) Analysis Asset (AA) 16

3.2.3 OECD Indicators 16

4 Improving efficiency and reducing wastage for value 17

4.1 Variation and overuse and underuse in healthcare services 17

4.2 Targeting variation through policy measurement 18

4.3 Changing the focus to high value care 18

4.4 Mobilising access for value 19

4.5 Linking social determinants with health outcomes 20

5 Recommendations 20

6 Conclusion 22

References 24

Acknowledgements

Many of the ideas contained within this brief were formed through my experiences in public health policy settings with the Northern Territory and Victorian Governments and countless conversations with my colleagues and mentors within the sector, to whom I am extremely grateful.

My sincerest thanks to Dr Rebecca Haddock (Director, Deeble Institute for Health Policy Research) and Alison Verhoeven (Chief Executive, AHHA) for their guidance and expertise in developing this brief and for their support in engaging with a raft of national subject matter experts and global thought leaders who assisted with the refinement and testing of many of the concepts presented within this paper.

This paper was developed as part of a Deeble Institute for Health Policy Research Summer Scholarship, supported by Dental Health Services Victoria.

Key messages

- Sustainable and efficient health improvements require a national policy focus on improving health outcomes for an appropriate cost. To effect this change, the Commonwealth must engage commissioning, data reporting and performance measurement policy levers on a national scale.
- Current national health policy emphasises costly and unsustainable upscale of healthcare volume and perpetuates ongoing inequities in access to care. The Commonwealth Government's Long Term National Health Plan includes commitments to support flexible care models that do not rely on fee for service, as well as the development of a national preventive health strategy. Without clear policy levers to measure and fund meaningful improvements in health outcomes, national efforts to achieve a vision of "a mentally and physically healthy Australia" are likely to be hampered.
- The National Health Agreement and related National Partnership Agreements must establish mechanisms to develop and report on health outcome indicators. A national framework for outcome-commissioning accompanied by an Implementation Plan to progressively shift toward an outcome-focused health system should form part of a reformed National Health Agreement.
- Mandatory development and linkage of health outcome data should be embedded in all national partnership reporting requirements, to be held in a national health outcome data repository under centralised custodianship. The Australian Commission on Safety and Quality in Health Care's (ACSQHC) validated patient-reported health and experience outcomes directory should be supported for initial work and ongoing development. National metadata architecture should be used across all national health data collections to facilitate linkage and modelling.
- Modelling of unwarranted variation in healthcare and differential costs of care should be mandated for all bilateral and multilateral funding agreements, commencing with existing data collections from activity-based National Partnership Agreements on healthcare currently in the Commonwealth's possession.
- Governing agreements for national healthcare funding should be revised to mandate independent cost modelling for all bilateral or multilateral health agreements and should mandate efficiencies through population-based prevention and mitigation of disease.

Executive summary

Australia's national health policy could be better. Health disparities have persisted and, in some cases, widened as a result of ineffective activity-based performance and accountability policy mechanisms for the delivery of healthcare. The Commonwealth Government has committed to the development of a national preventive health strategy and funding of flexible care models through its Long Term National Health Plan, but unless rigorous policy mechanisms to fund and measure improvements in health outcomes are actioned, national efforts will be unable to have an impact.

This Issues Brief presents a case for national health policy reform to drive improved health outcomes, through embedding principles of value-based healthcare in national policy. National policy mechanisms to transition away from activity-based and fee-for-service models which reward supplier generated demand, toward targeted services for improved health outcomes for the population while reducing costs of unnecessary care, are identified. Recommendations are made to harness existing policy governance and implementation mechanisms to drive provider accountability for improving health within efficient costs on a national scale.

Firstly, this Issues Brief calls for national policy reform to embed outcome metrics in performance and accountability frameworks and relate these to policy objectives across all national health funding agreements, such National Partnership Agreements and Commonwealth funded schemes. The importance of a national framework for outcome-commissioning to drive reform is identified, including opportunities for progressive implementation under the National Health Agreement, currently under reform.

Secondly, the need for data-driven performance and accountability mechanisms is identified, with respect to the development and routine collection of health outcome measures, mandated through commissioning frameworks. In doing so, current work to develop patient-reported health and experience outcomes and link national health datasets will be important for tracking outcomes for individuals across cycles of care and to relate social determinants to health outcome data. National metadata architecture should be used across all national health data collections to facilitate linkage and modelling.

Thirdly, this Issues Brief explores efficiency imperatives of reforming for value, including the role of accurately costing and measuring unwarranted variation in care. Independent cost modelling and reporting of unwarranted variation in healthcare should be mandated for all bilateral and multilateral health funding agreements.

Finally, this Issues Brief considers prevention within national value-based health policy and the potential for cost reductions in healthcare where integrated preventive strategies are related to health outcomes through national health funding policy. Value-based healthcare principles recognise cost savings for improved health by way of preventive strategies, including integrated prevention.

National value-based health policy can address inequities in access to care and outcomes of care for disadvantaged populations by creating mechanisms to incentivise access for disadvantaged populations by commissioning for outcomes but requires concerted action from national health policymakers and funders.

1 Background

1.1 Health disparities in Australia

Health disparities are systemic, avoidable differences in health which adversely impact socially disadvantaged groups (Sadana and Blas, 2013; Braveman et al., 2011). Australia's national policy does not adequately address health and healthcare disparities faced by disadvantaged populations (Veronesi et al., 2014). Despite intended targeting of health disparities driven by activity-based performance and accountability policy mechanisms of the National Health Reform Agreement (COAG, 2011a), Australia's disparate burden of chronic disease continues to grow (AIHW, 2018).

One in two Australians are currently estimated to have at least one chronic condition (AIHW, 2018). Steady rates of growth in life expectancy are plateauing and higher rates of chronic conditions associated with an ageing population are emerging (AHMAC, 2018). In Australia, chronic disease disproportionally impacts socially disadvantaged populations and gradients in access to care and the outcomes of care characterise health inequities (COAG, 2017; AIHW, 2018).

Aboriginal and Torres Strait Islander peoples experience significantly poorer health and wellbeing from birth and throughout life compared to non-Indigenous people (AHMAC, 2018). The gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Indigenous Australians is approximately 10 years (AHMAC, 2018). Babies born to Aboriginal and Torres Strait Islander mothers have higher rates of infant mortality and are more likely to be underweight than babies born to non-Indigenous mothers (AHMAC, 2018). Compared to the non-Indigenous population, Aboriginal and Torres Strait Islander peoples are three times more likely to require preventable hospital admissions for diseases which could have been managed in primary care settings at an earlier stage and are almost twice as likely to have a disability or restrictive long term health condition (AIHW, 2018).

People living in rural and remote areas and socially disadvantaged populations are also more likely to experience preventable health issues, complications of disease, poorer outcomes of care, disability and lower use of health services (AIHW, 2017). People living in remote areas have a mortality rate 1.3 times that of people living in cities (AIHW, 2017) and the prevalence of chronic health conditions such as diabetes and cardiovascular disease increases with remoteness (AIHW, 2017).

People who experience social disadvantage also experience a disproportionate burden of poor health. People in Australia's lowest socioeconomic group are more than twice as likely to die of potentially avoidable causes and 2.6 times more likely to have diabetes compared to the highest socioeconomic group (AIHW, 2018). If the health advantage of Australia's highest socioeconomic group was experienced equally across the population, Australia's burden of disease would be reduced by over 20 percent (AIHW, 2018).

To realise Australia's national policy objective of improving health for all Australians, our policy implementation levers must not only be relevant to the entire population but also capture important regional and socioeconomic differences of those populations with high care health care needs (Timpka et al., 2018).

1.2 Health policy in Australia

Government health policy shapes the way in which services are provided to people to prevent and treat illness (COAG, 2017). Over recent years, Commonwealth health policy has underpinned rapid cycles of short-term funding, with a focus on intensively scaling-up healthcare volume to address a growing burden of disease (Productivity Commission, 2015). This policy approach has informed the operation of numerous bilateral and multilateral National Partnership Agreements (NPAs) between the Commonwealth and states and territories for various aspects of healthcare, framed by the Intergovernmental Agreement on Federal Financial Relations (COAG, 2011b).

In the health sector, NPAs have emphasised reporting of implementation progress, compliance and program conduct and reflect a political imperative to demonstrate value for money based on allocative resource efficiency (National Commission of Audit, 2014). Limited health outcome reporting has prevented meaningful impact evaluations of healthcare policy and feedback into subsequent program and system design (Productivity Commission, 2018). As the impacts of NPAs on health outcomes are not required to be measured or reported, the actual impacts of these policies on health are unknown. The National Heads of Agreement 2020-2025 (COAG, 2018) risks continuation of volume-centric activity by stipulating a requirement for the continuation of activity-based funding as the preferred basis for funding public hospitals to 2025 in a new National Health Agreement. The National Heads of Agreement however provides a possible inroad for future system-wide reform through the inclusion of provisions for paying for value and outcomes within the National Health Agreement.

Australia's healthcare system reflects a devolved and multifaceted policy structure (Calder et al., 2019). A heavy reliance on allocative efficiency implementation levers elicits tension between the need for service providers to deliver on policy objectives within resource constraints, while at the same time integrating pathways of care for people with high health needs (OECD Health Policy Overview, 2011; Veronesi et al., 2014).

Australia's healthcare policy

Australia's healthcare system is governed by a complex mix of Commonwealth and state responsibilities and private sector involvement. The Commonwealth has carriage of primary care funding including Primary Health Networks (PHNs), the Medicare Benefits Schedule (MBS), the Pharmaceutical Benefits Scheme (PBS) and Private Health Insurance (PHI) rebates (COAG, 2018). The States function as system managers for public hospitals (COAG, 2012). Private hospitals are subject to both state and Commonwealth requirements (OECD Health Policy Overview, 2015).

The National Health Reform Agreement (COAG, 2011a) sets out financial arrangements between the Commonwealth and state and territory governments with an intention to improve health outcomes for all Australians and enhance the sustainability of the Australian health system (COAG, 2011a). The Agreement informed the delivery of care through activity-based performance and accountability mechanisms linked to funding provision. Activity-based funding mechanisms were applied initially to public hospitals, but similar approaches were later adopted in respect of other aspects of the healthcare system, through a series of discipline-specific bilateral agreements.

The current National Heads of Agreement, agreed by all states and territories except Queensland and Victoria, solidifies commitment to develop a reformed National Health Agreement 2020-2025 (COAG 2019).

Policy mechanisms

Policy implementation is the translation of policy aims and objectives into action (Khan and Khanaker, 2016). Implementation theory is often used by policy analysts to explain causal mechanisms by which a policy intervention yields outcomes (Pfadenhauer et al, 2017). While aspects of implementation theory are utilised in the instance of NPAs for healthcare, health outcomes are not routinely measured and causal mechanisms are not required to be evaluated. The Council on Federal Financial Relations (CFFR) requires jurisdictional implementation plans for each NPA (CFFR, 2015a). Plans require states and territories to develop a program logic, setting out activities, outputs, and outcomes, and to link these to policy aims and define roles and responsibilities of parties involved. Policy mechanisms drawn from current Implementation Plan requirements are (CFFR, 2015b):

- Funding allocation and efficiency
- Performance benchmarking, targets and indicators
- Data reporting requirements
- Program design and delivery requirements, including timeframes
- Defined roles and responsibilities
- Conduct requirements, including maintenance of effort
- Flexible program delivery modalities
- Activity-based funding and pay-for-performance

1.3 Reforming for equity

Current Commonwealth policy reform of the National Heads of Agreement provides an opportunity to reform Australia's health policy across all levels of government (COAG, 2017). In 2018, COAG, via the Heads of Agreement, settled detailed implementation plans for long term system wide reform to be incorporated into a five-year National Health Agreement (2020-2025) (COAG, 2018). However, in order to create focused policy implementation structures to improve healthcare inequities, a reformed National Health Agreement needs to leverage existing policy governance, performance and reporting functions to target improved health outcomes.

The Commonwealth's approach to rationalising state and territory responsibilities through performance funding has shaped consistent mechanisms for transparent and accountable reporting (Veronesi et al, 2014). Utilisation of Australia's policy design and delivery mechanisms should focus our healthcare system to improve disease prevention and management for populations most impacted by poor health, across complete cycles of care (AHHA, 2017).

In order to direct effort toward improved chronic disease management in primary care settings and integration of care for people with multiple and complex needs, policy levers such as funding allocation models, data reporting requirements, performance and accountability mechanisms and governance structures should be leveraged to target health inequities for high need populations (Meurk et al., 2018) through realignment within bilateral agreements and Implementation Plans.

1.4 Policy levers

Action to develop a strategy for long term system wide reforms was agreed by the COAG Health Council in February 2018 (COAG, 2018). Commitments included:

- Developing a system-wide approach to commission health services, based on value and health outcomes; and
- Continuing activity-based funding mechanisms as the basis for public hospital funding wherever practicable.

Implementation Plans attached to NPAs on health must reconcile the aspirations of the proposed National Health Agreement 2020-2025 with the realities of funding. Bilateral partnerships need to be utilised most effectively to improve Australia's health, while at the same time operating within financial constraints.

The aspiration of a sustainable healthcare system requires consideration of how policy mechanisms can be leveraged to support incremental reform to improve the value of healthcare over the short, medium and long term, including the following health policy reform opportunities:

- Reforming Australia's health governance systems to reduce fragmentation and improve coordination;
- Utilising performance and accountability frameworks to drive improvements in health outcomes;
- Developing and collating data on health outcomes and embedding these in commissioning frameworks;
- Understanding unwarranted variation in healthcare use across the health sector and eliminate wastage; and
- Commissioning for culture by spending where it matters most and recognising the economic, social and environmental advantages of improved population health through disease prevention and management.

1.5 National agenda for activity-based funding

A national policy position in favour of activity-based funding of public hospitals has been operationalised (National Health Reform Act 2011)..

Under activity-based funding, health service providers are funded for the activity they undertake, based on a collective policy approach to measuring and standardising the costs of delivering health care (Hall, 2015). Through funding agreements, activity is monitored and reported in the form of amount and mix of services delivered by providers, and a costing formula is used to determine a national efficient price for services. Some penalties are included to address safety and quality, including sentinel events and readmissions. This funding methodology is complemented by block funding for some rural and regional health service delivery. In the context of specific funding agreements, activity incentives may include other aspects of service delivery, such as providing care to certain types of patients or in certain geographical areas.

Current mechanisms to interface Australian activity-based policy with service delivery reflect a hierarchical and compliance-driven governance structure (Naiker, 2017). Efficiency imperatives aim to increase the volume of service provision capacity while lowering costs (Hall, 2015; Productivity Commission, 2015).

1.6 Data to support activity-based funding

The National Health Reform Agreement (COAG, 2011a) stipulates performance measurement criteria, such as waiting times, hospital bed utilisation, services provided and quality indicators such as unplanned re-admissions and preventable separations. These data have informed the implementation of activity-based funding.

The National Health Reform Agreement (COAG, 2011a) however, does not reconcile activity-based funding mechanisms with principles of vertical health equity that target services to address disparate health outcomes for people with high health needs. Rather, additional Commonwealth funding has been provided to states in accordance with efficient cost increases and volume growth (Hall, 2015).

1.7 Activity-based funding and equity

The risks of providing financial incentives to minimise costs associated with episodes of care, levels of services and quality of care has been recognised by the Commonwealth (Productivity Commission, 2018). Measuring and reporting on patient outcomes has been identified as a safeguard against substandard care and an integral strategy to rewarding states and territories for reforms based on improved health outcomes, not simply inputs (COAG, 2007). Despite good intentions, reductions in health inequity under national health reform policy have not been directly funded, reported or incentivised.

Contributions by the Commonwealth have been revised and are currently made based on population growth and inflation (COAG, 2011b). This has further limited state flexibility to target priority populations, particularly for jurisdictions that have not been able to generate and redirect revenue from sources other than the Commonwealth (Hall, 2015).

The overarching Commonwealth funding structure for public hospitals keeps states focused on maximising throughput and rewards the generation of further demand for tertiary care (Hall, 2015). Funding reforms are needed to create and implement strategies that remove supplier influence of demand and incentivise health management for high need populations.

Fee-for-service arrangements
In addition to activity-based agreements, public health care funding in Australia is underpinned by the Medicare Benefits Schedule (MBS) in accordance with a fee-for-service (FFS) policy position (Hall, 2015). FFS schemes such as the MBS reward providers who render more services, while compliance-driven rules and penalties attempt to minimise uncertainty and controls cost on the part of the funder. While FFS funding can enable providers to be flexible and responsive to the individual needs of patients, FFS funding also promotes unsustainable expenditure due to supplier-induced demand and lack of consumer incentive to constrain demand (Hall, 2015).

1.8 The problem of volume

The Parliament of Victoria Public Accounts and Estimates Committee (VPAEC) Inquiry into the Impact on Victorian Government Service Delivery of Changes to National Partnership Agreements (VPAEC, 2016) reviewed the operation of short-term NPAs administered under the Intergovernmental

Agreement on Federal Financial Relations (IGAFFR) and the impact of successive renewal of NPAs otherwise intended to be time-limited in nature (COAG, 2011b). The Committee identified that NPAs are most effective when specific reform is targeted with clear performance measures. It was also found that current and previous short term NPA funding often supported ongoing services without agreed process to transfer to long term arrangements. Limited operational flexibility, disproportionate reporting burden, an over-emphasis of compliance through frequent performance reporting of program metrics and limited consideration of long term impacts of funding agreements were also identified as issues (VPAEC, 2016).

Currently, NPAs provide little incentive for state and territory government spending on upstream prevention and early intervention for high risk populations, or the integration of multifactorial prevention across primary health and social services. Mitigation of disease should form the basis by which increased efficiencies are built into bilateral agreements.

The 2018 Productivity Commission Final Report into Reforms to Human Services identified several major unintended impacts of volume-focused health funding policy, including undue waitlist blowout associated with elevated supplier-induced demand (Productivity Commission, 2018). Excessive focus on activity targets has limited meaningful impacts on disease rates, disincentivised equitable service levels for hard to reach populations and promoted over-servicing of accessible populations (Productivity Commission, 2018). Similarly, fee for service schemes based on steady activity pricing, coupled with supplier-induced demand has increased volume and health system expenditure unsustainably (O'Brien et al., 2015).

The Intergovernmental Agreement on Federal Financial Relations (IGAFFR)

Australia's current approach to bilateral health policy implementation and funding is framed by the Intergovernmental Agreement on Federal Financial Relations (COAG, 2011b). The IGAFFR recognises constitutional responsibilities of states and territories to deliver key services with financial assistance from the Commonwealth. The IGAFFR also recognises the need for innovation and efficiency within service delivery, long term policy solutions for health, social and economic issues and the importance of collaboration between levels of government for reform.

In addition to bilateral commitment to address specific health and social issues, the framework allows states and territories flexibility in service delivery, while determining clear accountability for performance against outcome targets. Funding mechanisms enable this accountability, as Commonwealth payment is tied to achieving defined outcomes and performance targets.

Commonwealth Government funding for health has taken the form of tied grant funding with a specified purpose. Health funding has occurred by way of National Specific Purpose Payments, National Health Reform Agreement and National Partnership Payments. NPAs set out policy objectives for achieving outcomes and align these to performance measures and payment, thereby functioning as a performance and accountability framework. States and territories are responsible to implement the policy objectives of each NPA in accordance with administration requirements, overseen by the relevant Commonwealth Department. The Commonwealth Department of Treasury oversees payment.

2 Reforming for value

2.1 Moving governance from volume to value

Variation in the healthcare needs of a given population poses challenges for a one-size-fits-all approach to health policy performance and accountability mechanisms (Porter and Lee, 2013). Interconnectivity between primary care frameworks and strategies for health outcome measurement are lacking and scaling up volume, as the predominant modality of delivering primary care, remains the main approach behind Australia's policy mechanisms for bilateral funding of primary care (Oliver-Baxter, Brown and Bywood, 2013).

The establishment of an independent national health authority (AHHA, 2017) could provide the required coordination and national leadership to underpin the aspiration of the National Heads of Agreement (COAG 2019) for improved health. It will also be necessary to solidify governance-level commitment to value-based funding in all bilateral health agreements.

2.2 Value-based healthcare

Value-based healthcare is a model for the design, delivery, funding, reporting and evaluation of health services, which aims to maximise improvements in patient outcomes of care relative to cost (Woolcock, 2019). This approach rationalises care by focusing on demographic cohorts likely to derive a greater benefit of care, as opposed to an approach of equal rationing care amongst a whole population (Thaker and Feeley, 2016). Thus, value-based healthcare ensures resources are used to provide the greatest value to individuals, populations and society (Gentry, 2017). The value imperative therefore applies not only to individual patient outcomes of care, it also promotes allocative value through equitable resource allocation, improving quality of clinical care and minimising waste (Gentry, 2017).

What is value?

Value is the ratio of health outcomes achieved as a result of a healthcare intervention, relative to the costs of the intervention (Porter and Lee, 2013). Value is therefore directly proportional to a positive change in outcomes and inversely proportional to costs. Value is increased by improving health relative to costs, or lowering costs without compromising health outcomes, or both (Porter and Lee, 2013).

Outcomes can be defined for individuals and populations, can vary temporally and can reflect the outcomes of clinical care or patient-reported changes in health status (Porter and Lee, 2013). Standard sets for measuring outcomes for certain aspects of health have been developed by the International Consortium for Health Outcomes Measurement (ICHOM).

Costs relate to the total costs of care, across a complete cycle of care from start to finish (WEF, 2019). The value-based ideology does not promote an isolated reduction of costs, but maximises value based on the positive differential of outcomes of care, relative to costs of providing that care (Woolcock, 2019).

2.3 Principles of value-based healthcare policy

Value-based healthcare policy must set the conditions by which healthcare is designed, delivered, reported and evaluated, having regard to the contextual effectiveness of treatment, defined by outcomes achieved for costs (Porter and Lee, 2013). Currently, there is no common definition of what constitutes a value-based healthcare policy, or general agreement of criteria required for value-based healthcare policy. The policy mechanisms which underpin value-based healthcare are identified as:

- Governance structure:
  - Planning and funding at local levels (Woolcock, 2019; WEF, 2017).
  - Flexibility to adapt implementation in accordance with the local context and community needs (Woolcock, 2019; WEF, 2017).
- Commissioning structure:
  - Paying for value and outcomes (Gentry, 2017).
  - Bundling payments across complete cycles of care (Porter 2009).
- Reporting and accountability:
  - Cohesive data and reporting platforms (Bonde et al., 2017).
  - Systematic measurement of outcomes and costs for every patient (Porter, 2009).
  - Tracking of outcomes and costs for individuals over time (WEF 2018).
  - Data and information technology capabilities (Collden 2018, WEF 2018).
- Service provision models:
  - Integrated and patient-focused care across disciplines (Woolcock, 2019)
  - Integrated care across locales and facilities (Collden, 2018)
  - Geographical expansion according to health outcomes (Collden, 2018)
  - Customised care to improve value for population segments, based on need (WEF, 2018).
  - Improving health literacy, self-management and empowerment (Woolcock, 2019)
  - Preventing disease (Woolcock, 2019)
- Workforce:
  - Organised integrated practice units (Van Egdom et al., 2019; Collden, 2018; Porter and Lee 2013)
  - Multidisciplinary, team-based practice (Van Egdom et al., 2019)

2.4 Opportunities for governance reform

Government health policy deals predominantly with situations that are not subject to normal market mechanisms, such as targeting parts of the population in remote or disadvantaged areas (WHO, 2016). The concept of value-for-money therefore takes on a unique meaning within public health policy. Fee for service models are demand-driven, where providers receive payment for services rendered in accordance with prices that are not reflective of the actual value of care delivered or the outcomes achieved for patients (Productivity Commission, 2018; VAGO, 2016). Activity-based funding establishes an efficient price in accordance with time-based procedural-complexity and user characteristics, which does not account for differences in outcomes achieved as a result of care (Productivity Commission, 2018).

Thus, the volume-based policy paradigm enables policy mechanisms that favour provider and patient induced demand within limited supply, with little flexibility to adjust mechanisms to cater for specific population needs within different contexts. A volume-based reward system compounds the provision of low-value care and over servicing, without relating the impacts of care to health outcomes.

Value-based healthcare policy delivery mechanisms can be operationalised through commissioning frameworks, to organise and deliver healthcare in a way which incentivises a high value-ratio, or significant improvements in outcomes in relation to costs (NHS Clinical Commissioners, 2019).

It is on this basis that value-based healthcare minimises waste and improves cost efficiency, by removing incentives to purchase high volumes of low value care, where services are not likely to improve outcomes within an efficient cost (Gray, 2017). Value-based policy mechanisms aim to shift the paradigm toward targeted services, which relate to the greatest improvement in health outcomes for the population (Gray, 2017). Healthcare providers are rewarded for achieving positive impacts of care while reducing costs of unnecessary care (NHS Clinical Commissioners, 2019).

The current Heads of Agreement (COAG, 2019) solidifies commitment of the Commonwealth and state and territory governments to develop a reformed National Health Agreement 2020-2025 and provides imminent opportunity to reform Australia's governance, funding and data arrangements across all levels of government.

2.5 Creating a value-based policy culture

Australia's bilateral policy reflects supply-based principles, aiming to maximise service reach through maximising volume. The volume-based health policy approach equates treatment of disease and with health needs (Miller, 2009).

To ensure sustainability of an outcome-focused system, the Australian governments needs to commission for culture within funding agreements. A national policy rhetoric should recognise the economic, social and environmental advantages of improved health (O'Brien et al., 2016). Through national leadership and cross-government collaboration, the role of healthcare can be redefined beyond service provision.

Policymaking culture needs to shift to a rhetoric of spending where it matters most, to provide the best health outcomes for the population at the lowest cost. Australia's national health policy must evolve in order to improve health. The current Heads of Agreement between the Commonwealth and the States and Territories on public hospital funding and health reform 2020-2025 (COAG, 2019) frames Australia's strategic priorities with an intention to improve health outcomes for Australians and, if implemented with meaningful outcome-based accountability mechanisms, could set the tone for a redefined national policy culture.

3 Developing value-based healthcare policy metrics

3.1 Measuring for value

Policy performance and accountability mechanisms need to drive improvements in health outcomes. Existing activity-based mechanisms are not sensitive to the high needs of disadvantaged populations and perpetuate Australia's vertical inequity in health (Calder, 2019). Healthcare policies need to establish commissioning structures which are flexible to different population health needs and provide value for money (NHS Clinical Commission, 2018). This can occur through capturing and reporting changes in health outcomes as a function of the actual costs of providing care (Porter and Lee, 2013).

3.2 Improving policy metrics and data systems for health outcomes

> *"Rigorous measurement of value is perhaps the single most important step in improving health care. Wherever we see systematic measurement of results in health care—no matter what the country—we see those results improve…" -Porter and Lee, 2013.*

As new outcome indicators and data sources are developed, outcome-focused commissioning structures will require outcome measurements to be incrementally built into policy metrics (Booth and Boxall, 2016). It is though this incremental approach that a national capacity for value-based health care will be developed and embedded in policy. Data systems need to enable data and indicator development and routine collection and reporting of health outcomes across all aspects of the health system. A primary health national minimum dataset should be prioritised for development and inclusion in data collections (Thorpe and Sweeny, 2019).

Bilateral agreements should establish funding for the development and linkage of datasets, including health outcome indicator data collections and clinical quality registries. National Health Outcome Framework Indicators should be reflected in bilateral agreements and reported against using commissioning data, collated by the Australian Institute of Health and Welfare. As the commissioning structure matures, new data indicators should be included in the Framework Indicators.

Embedding outcome reporting in Australia's health policy will require several key enablers. Policy actors must possess an understanding of the principles of value-based care and collectively support a need to shift the current policy paradigm (Braithwaite, Skinner and Döéry, 2011). The Commonwealth, and state and territory service providers recognise the need to move towards a system that is more flexible and adaptive to the needs of disadvantaged populations (COAG, 2019).

Fundamental to embedding outcome reporting in health policy is the need for appropriate data collections and systems for reporting (Woolcock, 2019). An approach to incrementally develop and embed outcome reporting metrics in health policy will continue to create a policy imperative for data systems to evolve (Booth and Boxall, 2016). Additional data infrastructure development incentives must be built into national policy and funding agreements as a way to accelerate development.

Data systems need to collect and report information about the health outcomes that matter to individuals (Porter, Larsson and Lee, 2016). Australia is in a varying state of being able to do this. An example of this is the outcomes reporting being implemented by the National Disability Insurance Agency (NDIA, 2019) as it starts producing administrative data. Some national registry collections,

such as cancer registries, also provide a number of important outcome metrics which can be used to inform performance reporting (PCO, 2019)

3.2.1 Clinical quality registries

Clinical Quality Registries (CQRs) provide a mechanism by which outcome data collections can be incrementally developed and expanded across all components of the health system to provide important national performance and data reporting (Ahern et al., 2019; Woolcock, 2019; Gliklich, Dreyer and Leavy, 2010). It is essential that these collections are informed by existing platforms for international standardisation, such as those led by ICHOM (ICHOM, 2019).

The Australian Commission for Safety and Quality in healthcare has developed a framework for Australian Clinical Quality Registries, endorsed by Ministers in 2014 (ACSQHC, 2014). An evaluation of the economic impact for five Australian CQRs demonstrated efficiencies when registries were sufficiently matured (ACSQHC, 2016). Other benefits included greater survival, improved quality of life, avoided costs and overall improved the value of healthcare delivery at relatively low cost (ACQHC, 2016). As the benefits of CQRs are unlikely to be realised in the instance of low coverage, or inadequate reporting and collection of outcome data, this approach may not be initially suitable for implementation into all aspects of the health system - until standardised data collections are developed (ACSQHC, 2016).

To be effective, CQR's require policy governance to link provider performance with service commissioning (Ahern, 2019). To effectively drive improvements in health outcomes for all Australians, a national CQR must be accompanied by governance mechanisms to drive performance accountability, through a commissioning structure (Ahern et al., 2019). The Australian Commission on Safety and Quality in Healthcare is currently formulating a position on such governance arrangements while developing a clinical quality registry standard (ACSQHC, 2019a).

To improve the reach and effectiveness of healthcare by incentivising improved health outcomes through CQRs, the Australian Government should immediately develop a national framework for an outcome commissioning structure, accompanied by an implementation plan to incrementally shift towards a revised policy framework. This could take a similar approach to the development of the National Health Service England Outcomes Framework (NHS Digital, 2019).

3.2.2 National Integrated Health Services Information (NIHSI) Analysis Asset (AA)

The development of the National Integrated Health Services Information (NIHSI) Analysis Asset by the Australian Institute of Health and Welfare (AIHW) and the Commonwealth Department of Health, will act to accelerate data linkage and integration of acute care data sets with primary data for example, MBS data (Department of Health, 2019; AIHW, 2019). A series of minimum data indicators for primary health should be prioritised for inclusion in the Analysis Asset (Thorpe and Sweeney, 2019).

3.2.3 OECD Indicators

The OECD Patient-Reported Indicators Surveys (PaRIS) initiative (OECD, 2019) intends to refocus healthcare systems toward patient-centred care, by way of systematic data collection and reporting. The PaRIS initiative provides a mechanism for international benchmarking of patient-reported health and experience outcomes in order to accelerate and standardise outcome-based performance reporting. Current focus areas include hip and knee replacements, breast cancer and mental health care, as well as a survey of patient reported outcome measures (PROMs) and patient reported experience measures (PREMs) for patients with chronic condition in primary and ambulatory care settings (OECD, 2019).

Guiding principles for value-based health policy metrics

A range of metrics should reflect five thematic areas (Raymond, 2019):

- population health outcomes
- clinical process outcomes
- patient or consumer clinical outcomes
- patient reported outcomes
- quality outcomes

Policy metrics associated with the Value Based Healthcare (VBHC) model define value as a ratio of outcomes and costs. VBHC policy metrics themselves must be able to (Woolcock, 2019; Porter, 2009):

- establish baseline measures
- be measured systematically
- be reported across complete care cycles
- be stratified for population cohorts in accordance with their needs
- and measure outcomes relative to all-inclusive costs of care
- Incorporate both near-term and longer-term aspects, addressing a period long enough to encompass both the ultimate result from the health care provided;
- capture health status achieved or retained
- Include sufficient measurement of risk factors or initial conditions to allow for risk adjustment and stratification

4 Improving efficiency and reducing wastage for value

4.1 Variation and overuse and underuse in healthcare services

All healthcare funding policy must consider the ways in which people are being treated differently within the healthcare system. National analysis of healthcare provision in Australia has shown wide variation in the rates of different healthcare treatments and outcomes for a range of different health conditions and indications for care (ACSQHC, 2018). Extending this analysis across the remit of all healthcare policy will provide a more comprehensive understanding of how healthcare use varies between parts of the population who are the target of a given healthcare policy.

While some differences in healthcare treatments for a given condition can be attributed to individual health needs, a substantial amount of unexplained or unwarranted variation in treatments for the same condition currently exists (ACSQHC, 2018). Most of this variation is not routinely measured or understood in the context of healthcare provision in accordance with activity-based policy (Sheridan, 2016).

Reducing unwarranted variation is associated with reduced patient harm, improved equity of access to care, improved uptake of evidence-based care and more cost-effective care (ACSQHC, 2019a). The inclusion of these accountability mechanisms in all health policy is essential to underpinning the provision of equitable and appropriate care (Cookson et al., 2018).

The concept of using variation as a policy lever is a critical aspect of shifting from activity-based policy to value-based policy (Sheridan, 2018).

Policy metrics must capture:

- the nature and extent of treatments which are underused, and which are known to have proven benefits (Glasziou et al., 2018; Elshaug et al., 2017); and
- overuse of treatments which may be ineffective, unnecessary or of limited value to improving outcomes (Elshaug et al., 2017).

By highlighting these areas of inefficiency, where low value care is being provided unnecessarily, or where people who will benefit most from care are missing out, the value imperative of policy is created (Elshaug et al., 2017). Systematic health outcome data repositories such as CQRs provide a mechanism for benchmarking unwarranted variation between providers (ACSQHC, 2016), so low value care can be identified and targeted.

4.2 Targeting variation through policy measurement

To implement value-based policy, information contained within our current clinical systems needs to be put to better use. Analysis of variation across all bilaterally funded healthcare should be commissioned by the Commonwealth and carried out by the Australian Commission on Safety and Quality in Healthcare (ACSQHC, 2018).

To be able to understand variation in health outcomes as a consequence of care, outcomes data should be routinely collected and measured in Australia (Gallagher and Krumholz, 2011). The mandatory collection and reporting of health outcomes, in addition to service delivery activity, should be built into all bilateral healthcare funding agreements and stipulated by overarching policy frameworks. This approach will enable data collection and reporting to develop in areas where CQRs are not utilised. At a minimum, public healthcare funding should link services delivered to individuals to patient outcomes. This will provide further insight into those parts of the populations most likely or least likely to benefit from care.

The Australian Government should commission the analysis of bilateral national healthcare activity data held in their possession, in order to understand current variation in healthcare in Australia and respond to identified inequities in access and provision of care to reduce overtreatment of accessible populations and eliminate underservicing of high need populations. Findings should be published in the annual Australian Commission on Safety and Quality in Healthcare Atlas of Variation in Healthcare (ACSQHC, 2018).

4.3 Changing the focus to high value care

The COAG annual report against indicators of the National Health Performance Framework (Productivity Commission, 2019) examines the incidence of health conditions and behaviours across the population that are relevant to both primary and hospital care. These indicators, including age-standarised mortality, immunisation rates and smoking prevalence are intended for population surveillance and may therefore provide an indirect indication of policy impacts, but do not yield information about individual experience of care.

The AIHW routinely reports against a small number of PROMs in the biennial Australia's Health Report relevant to primary health disciplines (AIHW, 2018). However, reported indicators focus on specific conditions and cannot be related to cycles of primary health care. Further development of health outcome indicators which can be measured across complete cycles of care is needed. There is substantial groundwork being done on developing and collecting PROMS and PREMS in numerous

state and territory health programs (ACI, 2019) and the Australian Commission on Safety and Quality in Health Care's national validated PROMs database (ACSQHC, 2019b).

The use of clinical registries has limitations. Australian clinical registries collate vast amounts of data for specific conditions to enable direct relation of clinical outcomes to patient needs and quality of care (Porter, Pablo and Lee, 2013). However, the clinical registry approach is difficult to reconcile with primary care which intrinsically deals with a vast array of conditions relevant to the whole patient, not a single-specific condition. This extreme degree of diversity of patient needs makes identifying and measuring patient outcomes of primary care extremely complex (Porter, Pablo and Lee 2013). Data contained within registries only enable reporting of health outcomes if the indicators are collected and designed for this purpose (Woolcock, 2019).

To implement value-based health care through policy, policymakers need to consider both universal and targeted approaches (Marmot, 2015). A patient-centered approach to team-based care has shown to be useful in measuring patient outcomes across cycles of care (Reiss-Brennan, 2016). However, this is contingent upon grouping primary and preventive needs with intentional dataset design and collection (Porter, Pablo and Lee, 2013).

4.4 Mobilising access for value

Opportunity of access has been described as a product of the characteristics of users of a health system and the determinants of how they interact with the system (Levesque, Harris and Russell, 2013). Australia's approach to universal health care promotes horizontal equity which enables people with similar health care needs equal opportunity to access healthcare (Calder et al., 2019). Australia's disadvantaged populations continue to experience a significant mismatch between healthcare utilisation rates and healthcare needs (AIHW, 2018). This trend reflects a social gradient observed in Australia, which elicits vertical inequities in access to care for people with differing needs.

The fulfilment of health care needs relates to the ability of the health system to deliver effective and appropriate care that improves health outcomes, and the processes by which this care is delivered system (Levesque et al., 2013). Access therefore results from the interface between the characteristics of the social and physical environments of individuals, families and communities and the characteristics of health systems, organisations and providers who deliver care (Levesque et al., 2013). Social and environmental factors that impact individuals are not typically amenable to health policy interventions. Principles of value-based access focus on barriers and challenges to people having their health needs met and counteracting enablers which can be implemented.

Geographical remoteness, sparseness and social disadvantage are significant contextual issues for Australian policymakers (Bourke et al., 2013). Current approaches to demonstrating value in hospital-based care may not be suitably translated into primary care settings. Similarly, value-based primary care mechanisms emerging globally (Porter et al.,, 2013) need to be carefully considered having regard to the Australian context.

Policy implementation mechanisms for value-based care must avoid further rationing of care, as opposed to rationalising resources to where they will provide greatest population health benefit (Porter et al., 2013). Value-based healthcare will not create access to care that is indicative of need unless principles of equity are built into underlying policy (Putera, 2017). In order to reduce the risk of overlooking disadvantaged populations in value-based commissioning, socioeconomic data need to be captured and linked to outcome data (Sadana and Harper, 2011).

4.5 Linking social determinants with health outcomes

Value based health care includes broader issues that impact individuals' health, including those which are socially determined. Improving health requires addressing social determinants of health and recognising these factors in terms of what individuals' value when defining outcomes of care (Andermann, 2016). Approaches to combining datasets to consider health outcomes related to social determinants of cohorts have been established (Sadana and Harper, 2011) and should be adopted by Governments to better assess and respond to the needs of population cohorts.

Health needs are proportional to health risks and can be stratified according to similar co-morbidities and social determinants, as opposed to diagnostic conditions (Garg et al., 2016). Outcomes of care can be measured based on contributions to maintaining and improving health for populations, especially for those with elevated risk factors for preventable disease (Putera, 2017). Policy funding mechanisms should therefore recognise need related groupings within outcome metrics, as opposed to diagnostic groupings.

Broader population health and preventive value can also be considered within a national value-based policy approach (Jacobson et al., 2015; Shaw et al., 2014). COAG should mandate integrated early intervention and prevention clauses in all bilateral health agreements.

5 Recommendations

5.1 Recommendation 1: SHORT TERM - Existing data systems should be leveraged to understand and address unwarranted variation across the healthcare system.

National variation in healthcare use is not routinely modelled beyond hospital services, yet substantial service data are available across the primary health system, through state/territory and national collections.

The Australian Government should commission the analysis of current national health activity data collections held in their possession, commencing with health service data collected via bilateral and multilateral health activity funding agreements, in order to:

- Understand current variation in nationally funded healthcare in Australia.
- Engage policymakers and health administrators by publishing findings in the Australian Commission on Safety and Quality in Healthcare Atlas of Variation in Healthcare and other service access and chronic disease atlases
- Provide evidence to inform the development of policy and guidelines and enable performance measurement.
- Respond to identified inequities in access and provision of care to reduce overtreatment of accessible populations and eliminate underservicing of high need populations.
- Identify populations who are less likely to have their health needs met across multiple parts of the health system.
- Expand the analysis to state and territory health information systems as analytical capabilities mature.

5.2 Recommendation 2: *MEDIUM TERM - Develop and embed outcome-based metrics in performance and accountability frameworks and relate these to policy objectives in all national health agreements.*

The Australian Government should develop a national blueprint for an outcome commissioning structure to replace the current National Health Performance Framework and use this as an accountability mechanism to drive improved health outcomes through national health funding agreements. This should be accompanied by an implementation plan to establish a National Health Outcomes Framework, consistent with the approach of the National Health Service (NHS) England.

The implementation plan will need to include provision for data development, linkage and reporting on health outcome indicators for high need populations. Indicators should be:

- Specific enough to enable baseline and systematic measurement of health status and the impacts of care across complete care cycles, relative to total costs.
- Sensitive enough to enable stratification and adjustment across population cohorts based on health needs and risk factors.
- Robust enough to incorporate near-term and longer-term changes in health, both as an immediate result of care and in terms of sustainability of health.

Consistent with a National Health Outcomes Framework, reporting of framework indicators should be mandated by all national funding agreements and captured within health agreement commissioning data. A national healthcare activity and outcome data repository should be established by the Australian Government to accompany all future national health agreements, under centralised custodianship of the Australian Institute of Health and Welfare. As commissioning matures, new datasets such as patient reported outcomes should be included in framework indicators.

5.3 *Recommendation 3: MEDIUM TERM - Calculate the actual costs of providing cycles of care and re-develop national policy to fund outcomes in relation to these costs.*

Accurate costings across cycles of primary health care are yet to be substantiated or defined for different diagnostic conditions and populations. All bilateral or multilateral funding agreements should require cost differentials to be modelled by the Independent Hospital Pricing Authority to establish a National Efficient Price for all nationally funded health services, underpinned by amendment of the National Health Reform Act 2011 (Commonwealth).

To effect this change, the Intergovernmental Agreement on Federal Financial Relations should be revised to mandate independent cost modelling for all bilateral or multilateral health funding agreements.

National metadata architecture,for example, METeOR-AIHW should be used across all national health data collections to facilitate linkage and modelling. This will enable more robust modelling to be carried out as outcome-based commissioning structures mature. Reporting could be extended to include private health insurer data as systems mature.

5.4 Recommendation 4: MEDIUM TERM - Recognise cost reduction and improved health outcomes through integrated disease mitigation across services.

The Australian Government should establish a policy position to include mechanisms within funding agreements to incentivise state and territory government spending on upstream prevention and early intervention and integrate prevention and early intervention across primary health and social services.

Mitigation of disease should form the basis by which increased efficiencies are built into all bilateral and multilateral funding agreements. COAG should mandate integrated early intervention and prevention clauses in all national health agreements.

6 Conclusion

Sustainable and enduring improvements in Australia's health requires purposeful national policy to fund and measure improvements in health outcomes. In order to shift the current throughput-focused and demand-driven healthcare paradigm, national health policy reform must draw upon concerted policy mechanisms to redirect systems toward delivering meaningful improvements in health outcomes, especially for populations who stand to derive the greatest benefits from care. This requires emerging principles of value-based healthcare to be embedded in Australia's national health policy.

Value-based national healthcare policy reform is underpinned by an intention to maximise improvement in the patient-derived outcomes of healthcare, relative to the costs of providing that care. National policy reform for value must be driven by the identification and application of policy mechanisms to direct healthcare provider performance and accountability for delivering improved health outcomes for efficient costs. In doing so, Australia's health data collections must be put to better use. Accountability for improving Australia's health must be driven by purposeful collection of information about health outcomes of care within the approach to commissioning. National policy reform must identify and embed outcome metrics in performance and accountability frameworks and universally relate these to policy objectives across national health funding agreements.

An outcome-commissioning framework is essential to direct the delivery of high-value healthcare and must be underpinned by suitable data metrics and systems for collection and reporting. It is essential for the Commonwealth Government to lead the development of a national health outcome commissioning framework. A similar approach to the NHS England could be utilised. Given the recent announcement of Australia's Long Term National Health Plan, which identifies an imperative to value prevention and implement flexible models of care, together with an identified intention of the National Heads of Agreement (2020-2025) to reflect principles of value-based healthcare in funding agreements, it is timely that this work is immediately prioritised by the Commonwealth Government.

An implementation plan to accompany a national health outcome commissioning framework should identify mechanisms by which health outcome data collections can be incrementally developed and expanded across all aspects of the health system. Tools such as Clinical Quality Registries and Patient Reported Indicator Surveys, in addition to performance indicators within bilateral and multilateral health funding agreements, can meaningfully support policy performance and accountability mechanisms, where health outcome metrics are standardised, related to individuals' care needs and measured across complete cycles of care.

The development of health outcome data collections will take time. Current work to expand collections of standardised health outcome measures, including Patient-Reported Health Outcome Measures and Patient-Reported Experience Measures, develop Clinical Quality Registries and to improve data linkage should be incorporated into Australia's overarching national health policy. Data linkage also needs to relate social determinants to health outcome data to reflect health equity principles in national policy. Data systems should be incrementally developed as commissioning structures mature.

A national approach to value-based healthcare also requires policy mechanisms to promote cost efficiencies in delivering care. This requires accurate costings to be calculated across individuals' complete cycles of care. The role of the Independent Hospital Pricing Authority should be expanded to carry out cost modelling for all aspects of nationally funded healthcare. Similarly, cost efficiencies through the delivery of appropriate and effective care should be modelled in relation to unwarranted variation in care. The Australian Government should commission the analysis of bilateral national healthcare activity data held in their possession. Cost efficiencies are also driven by valuing prevention, especially integrated prevention across health and social disciplines and for chronic conditions with common risk factors.

It is essential that the Commonwealth Government prioritises action to address Australia's growing and disparate burden of disease. Enduring improvements require systemic reform to meaningfully fund improvements in health outcomes, underpinned by fit-for-purpose data capture and reporting, embedded within national health policy.

References

Ahern S, Evans S, Hopper I, and Zalcberg J. 2019. Towards a strategy for clinical quality registries in Australia. *Australian Health Review,* 43 (3), p.284-287.

Andermann A. 2016. Taking action on the social determinants of health in clinical practice: a framework for health professionals. *Canadian Medical Association Journal,* 188 (17-18), p.E474-E483.

Australian Commission on Safety and Quality in Health Care (ACSQHC) 2019a. *National arrangements for clinical quality registries,* viewed 1 October 2019, https://www.safetyandquality.gov.au/our-work/national-arrangements-clinical-quality-registries#future-work

Australian Commission on Safety and Quality in Health Care (ACSQHC) 2019b. *PROMs lists,* viewed 1 October 2019, https://www.safetyandquality.gov.au/our-work/indicators-measurement-and-reporting/patient-reported-outcomes/proms-lists

Australian Commission on Safety and Quality in Health Care (ACSQHC) 2018. *The Third Australian Atlas of Healthcare Variation*, viewed 1 October 2019, https://www.safetyandquality.gov.au/our-work/healthcare-variation/atlas-2018

Australian Commission on Safety and Quality in Health Care (ACSQHC) 2016. *Economic evaluation of clinical quality registries: final report*, viewed 1 October 2019, https://www.safetyandquality.gov.au/sites/default/files/migrated/Economic-evaluation-of-clinical-quality-registries-Final-report-Nov-2016.pdf

The Australian Commission on Safety and Quality in Health Care (ACSQHC) 2014. *Framework for Australian clinical quality registries*, viewed 1 October 2019, https://www.safetyandquality.gov.au/sites/default/files/migrated/Framework-for-Australian-Clinical-Quality-Registries.pdf

Australian Health Ministers' Advisory Council (AHMAC) 2018, *Aboriginal and Torres Strait islander health performance framework 2017 report*, viewed 1 June 2019, https://www.aihw.gov.au/reports/indigenous-health-welfare/health-performance-framework/contents/overview

Australian Healthcare and Hospitals Association (AHHA) 2017, *Healthy people, healthy systems: Strategies for outcomes-focused and value-based healthcare, a blueprint for a post 2010 National Health Agreement,* viewed 1 May 2019, https://ahha.asn.au/sites/default/files/docs/policy-issue/ahha_blueprint_2017_0.pdf

Australian Institute of Health and Welfare (AIHW) 2019, *Approved AIHW linkage projects*, viewed 1 October 2019, https://www.aihw.gov.au/our-services/data-linkage/approved-aihw-linkage-projects

Australian Institute of Health and Welfare (AIHW) 2018, *Australia's health 2018: in brief,* viewed 31 July 2019, https://www.aihw.gov.au/reports-data/health-welfare-overview/australias-health/overview

Australian Institute of Health and Welfare 2017, *Rural and remote health (web report),* viewed 1 June 2019, https://www.aihw.gov.au/reports/rural-health/rural-remote-health/contents/rural-health

Bonde M, Bossen C, and Danholt P. 2017. Translating value-based healthcare into practice. In *Infrahealth 2017-Proceedings of the 6th International Workshop on Infrastructure in Healthcare 2017.*

Booth M, and Boxall, A.M. 2016. Commissioning services and primary health networks. *Australian Journal of Primary Health*, 22 (1), p.3-4.

Bourke L, Taylor J, Humphreys J.S, and Wakerman J. 2013. "Rural health is subjective, everyone sees it differently": Understandings of rural health among Australian stakeholders. *Health & Place,* 24, p.65-72.

Braithwaite J, Skinner C.A, and Döéry M.L. 2011. A values-based health system. *Medical Journal of Australia*, 194 (5), p.259-262.

Braveman P.A, Kumanyika S, Fielding J, LaVeist T, Borrell L.N, Manderscheid R, and Troutman, A. 2011. Health disparities and health equity: the issue is justice. *American Journal of Public Health*, *101* (S1), p.S149-S155.

Calder R, Dunkin R, Rochford C, and Nichols T. 2019. Australian health services: too complex to navigate: a review of the national reviews of Australia's health service arrangements. *Australian Health Policy Collaboration*, Policy Issues Paper No. 1 2019, AHPC.

Colldén C, and Hellström A. 2018. Value-based healthcare translated: a complementary view of implementation. *BMC Health Services Research,* 18(1), p.681.

Cookson R, Asaria M, Ali S, Sha R, Doran T, and Goldblatt P. 2018. Health equity monitoring for healthcare quality assurance. *Social Science & Medicine*, 198, p.148-156.

Council of Australian Governments (COAG) 2019, *Heads of Agreement between the Commonwealth and the States and Territories on public hospital funding and health reform,* viewed 1 June 2019, https://www.coag.gov.au/sites/default/files/agreements/heads-of-agreementhospital-funding.pdf

Council of Australian Governments (COAG) 2018, *Heads of Agreement between the Commonwealth and the States and Territories on public hospital funding and health reform*, viewed 1 June 2019, https://www.coag.gov.au/sites/default/files/agreements/heads-of-agreementhospital-funding.pdf

Council of Australian Governments (COAG) 2017, *National Strategic Framework for Chronic Conditions,* viewed 31 July 2019, http://www.health.gov.au/internet/main/publishing.nsf/content/nsfccCouncil of Australian Governments (COAG) 2012, *National Healthcare Agreement,* viewed 31 July 2019, http://www.federalfinancialrelations.gov.au/content/npa/health/_archive/healthcare_national-agreement.pdf

Council of Australian Governments (COAG) 2011a, *National Health Reform Agreement*, viewed 31 July 2019, http://www.federalfinancialrelations.gov.au/content/npa/health/_archive/national-agreement.pdf

Council of Australian Governments (COAG) 2011b, *Intergovernmental Agreement on Federal Financial Relations,* viewed 31 July 2019, http://www.federalfinancialrelations.gov.au/content/intergovernmental_agreements/IGA_federal_financial_relations_aug11.pdf

Council of Federal Financial Relations (CFFR) 2015a, *Federal Finances Circular No. 2015/01 – Developing National Partnerships under the Federal Financial Relations Framework*, viewed 1 June 2019 http://www.federalfinancialrelations.gov.au/content/circulars/Circular_2015-01.pdf

Council of Federal Financial Relations (CFFR) 2015b, *Federal Finances Circular No. 2015/02 – Developing Implementation Plans for National Partnerships*, viewed 1 June 2019 http://www.federalfinancialrelations.gov.au/content/circulars/Circular_2015-02.pdf

Department of Health 2019, *Data Integration Partnership Australia (DIPA),* viewed 1 October 2019, https://www1.health.gov.au/internet/main/publishing.nsf/Content/Data-Integration-Partnership-Australia

Elshaug A.G, Rosenthal M.B, Lavis J.N, Brownlee S, Schmidt H, Nagpal S, Littlejohns P, Srivastava D, Tunis S, and Saini V. 2017. Levers for addressing medical underuse and overuse: achieving high-value health care. *The Lancet*, 390 (10090), p.191-202.

Gallagher M.P, and Krumholz, H.M. 2011. Public reporting of hospital outcomes: a challenging road ahead. *Medical Journal of Australia,* 194 (12), p.658-660.

Gentry S, and Badrinath P. 2017. Defining health in the era of value-based care: lessons from England of relevance to other health systems. *Cureus,* 9(3).

Garg A, Boynton-Jarrett R, and Dworkin P.H. 2016. Avoiding the unintended consequences of screening for social determinants of health. *JAMA*, 316(8), p.813-814.

Glasziou P, Straus S, Brownlee S, Trevena L, Dans L, Guyatt G, Elshaug A.G, Janett R, and Saini V. 2017. Evidence for underuse of effective medical services around the world. *The Lancet*, 390 (10090), p.169-177.

Gliklich R.E, Dreyer N, and Leavy M.B., 2010. Registries for evaluating patient outcomes. *Agency for Healthcare Research and Quality,* 6, p.600-611.

Gray M. 2017. Value based healthcare. *British Medical Journal, 356 (j437).*

Hall J. 2015. Australian health care—the challenge of reform in a fragmented system. *New England Journal of Medicine,* 373 (6), p.493-497.

International Consortium for Health Outcome Measures (ICHOM) 2019, *Standard Sets*, accessed 1 October 2019, www.ichom.org

Jacobson R.M, Isham G.J, and Rutten L.J. 2015. Population health as a means for health care organizations to deliver value. *Mayo Clinic Proceedings*,90 (11), p. 1465-1470.

Khan A.R, and Khandaker S. 2016. A critical insight into policy implementation and implementation performance. *Public Policy and Administration*, *15* (4), p. 538–548.

Levesque J.F, Harris M.F, and Russell, G. 2013. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. *International Journal for Equity in Health,* 12(1), p.18.

Marmot M. 2015. The health gap: the challenge of an unequal world. *The Lancet*, 386 (10011), p.2442-2444.

Meurk C, Harris M, Wright E, Reavley N, Scheurer R, Bassilios B, Salom C, and Pirkis J. 2018. Systems levers for commissioning primary mental healthcare: a rapid review. *Australian Journal of Primary Health*, 24 (1), p.29-53.

Miller H.D. 2009. From volume to value: better ways to pay for health care. *Health Affairs*, 28 (5), p.1418-1428.

Naiker, U. 2017. *Waiting times: The outpatient referral process, variation, performance and structural influences*. Queensland University of Technology.

National Disability Insurance Agency (NDIA) 2019, *COAG Disability Reform Council Quarterly Report 30 June 2019,* viewed 1 October 2019, https://www.ndis.gov.au/media/1612/download

National Health Service (NHS) Digital 2019, *NHS Outcomes Framework Indicators - August 2019 Release*, viewed 1 October 2019, https://digital.nhs.uk/data-and-information/publications/clinical-indicators/nhs-outcomes-framework/current

National Health Service (NHS) England Clinical Commissioners 2018, *Integrated commissioning for better outcomes A commissioning framework*, viewed 1 October 2019, https://www.local.gov.uk/sites/default/files/documents/25.70_Integrated%20Commissioning%20for%20Better%20Outcomes_final.pdf

National Commission of Audit 2014, *The report of the national commission of audit,* viewed 31 July 2019, https://www.ncoa.gov.au/sites/g/files/net4136/f/phase_two_report.pdf

National Health Reform Act 2011, viewed 1 June 2019, https://www.legislation.gov.au/Details/C2016C01050

New South Wales Government Agency for Clinical Innovation (ACI) 2019, *Patient Reported Measures Outcomes that Matter to Patients*, viewed 1 October 2019, https://www.aci.health.nsw.gov.au/make-it-happen/prms

O'Brien S, Edge N, and Clark S. 2016. A strategy to reposition the South Australian health system for quality and value. *Australian Journal of Primary Health,* 22 (1), p.26-33.

Organization for Economic Cooperation and Development (OECD) 2019, *Patient-Reported Indicators Surveys (PaRIS),* viewed 1 June 2019, https://www.oecd.org/health/paris.htm

Organization for Economic Cooperation and Development (OECD) Health Policy Overview 2015, *Health Policy in Australia,* viewed 1 June 2019, http://www.oecd.org/australia/Health-Policy-in-Australia-December-2015.pdf

Oliver-Baxter J, Brown L, and Bywood P.T. 2013. Integrated care: what policies support and influence integration in health care in Australia? Primary Health Care Research and Information Service (PHCRIS), viewed 1 June 2019, https://dspace2.flinders.edu.au/xmlui/bitstream/handle/2328/36223/PIR_Integration%20report%201_macro.pdf?sequence=1&isAllowed=y

Pfadenhauer L.M, Gerhardus A, Mozygemba K, Lysdahl K.B, Booth A, Hofmann B, Wahlster P, Polus S, Burns J, Brereton L, and Rehfuess, E. 2017. Making sense of complexity in context and implementation: the Context and Implementation of Complex Interventions (CICI) framework. *Implementation Science*, *12* (1), p.21.

Porter M.E, Larsson S, and Lee T.H. 2016. Standardizing patient outcomes measurement. *New England Journal of Medicine*, 374 (6), p.504-506.

Porter M.E, and Lee T.H. 2013. The strategy that will fix health care. *Harvard Business Review,* viewed 1 March 2019, https://hbr.org/2013/10/the-strategy-that-will-fix-health-care

Porter M.E. 2009. A strategy for health care reform—toward a value-based system. *New England Journal of Medicine,* 361 (2), p.109-112.

Productivity Commission 2019, *Report on Government Services – Part E (Health),* viewed 1 June 2019, https://www.pc.gov.au/research/ongoing/report-on-government-services/2019/health

Productivity Commission 2018, *Reforms to Human Services,* viewed 1 June 2019, https://www.pc.gov.au/inquiries/completed/human-services/reforms/report

Productivity Commission 2015, *Efficiency in Health*, Commission Research Paper, Canberra.

Prostate Cancer Outcomes (PCO) 2019. *Australia and New Zealand- Prostate Cancer Outcomes Registry*, viewed 1 October 2019, https://prostatecancerregistry.org/

Putera I. 2017, 'Redefining Health: Implication for Value-Based Healthcare Reform', *Cureus*, 9 (3), p. e1067.

Raymond K. 2019. *Briefing Paper - Tracking oral health outcomes.* Dental Health Services Victoria (Unpublished).

Reiss-Brennan B, Brunisholz K.D, Dredge C, Briot P, Grazier K, Wilcox A, Savitz L, and James B. 2016. Association of integrated team-based care with health care quality, utilization, and cost. *JAMA*, 316(8), p.826-834.

Sadana R, and Blas E. 2013. What can public health programs do to improve health equity *Public Health Reports*, *128*(6_S3), p.12-20.

Sadana R, and Harper S. 2011. Data Systems Linking Social Determinants of Health with Health Outcomes: Advancing Public Goods to Support Research and Evidence-Based Policy and Programs, *Public Health Reports*, 126, (S3), p. 6–13.

Shaw F.E, Asomugha C.N, Conway P.H, and Rein A.S. 2014. The Patient Protection and Affordable Care Act: opportunities for prevention and public health. *The Lancet*, 384 (9937), p.75-82.

Sheridan, J. 2016. *Activity Based Funding: The implications for Australian health policy* (University of Sydney).

Thaker, N.G, and Feeley, T.W. 2016. Creating the healthcare transformation from volume to value. *America's Healthcare Transformation. Strategies and Innovations.* Ed. Phillips, RA Rutgers University Press, New Brunswick, USA, p.295-318.

Thorpe M, and Sweeny S. 2019,. *Deeble Issues Brief No. 29: Call for the establishment of a primary health care national minimum data set*, viewed 1 October 2019, https://ahha.asn.au/system/files/docs/publications/deeble_issues_brief_no_29_primary_healthcare_nmds_0.pdf

TimpkaT, Nyce J.M, and Amer-Wahlin I. 2018. Value-Based Reimbursement in Collectively Financed Healthcare Requires Monitoring of Socioeconomic Patient Data to Maintain Equality in Service Provision. *Journal of General Internal Medicine*, *33* (12), p.2240-2243.

Van Egdom L.S, Lagendijk M, van der Kemp M.H, van Dam J.H, Mureau M.A, Hazelzet J.A, and Koppert L.B. 2019. Implementation of value-based breast cancer care. *European Journal of Surgical Oncology,* 45 (7), p.1163-1170.

Veronesi G, Harley K, Dugdale P, and Short S.D. 2014. Governance, transparency and alignment in the Council of Australian Governments (COAG) 2011 National Health Reform Agreement. *Australian Health Review*, *38* (3), p.288-294.

Victorian Auditor-General's Office (VAGO) 2016. *Access to Public Dental Services in Victoria*, viewed 1 October 2019, https://www.audit.vic.gov.au/sites/default/files/20161107-Dental-Services.pdf

Victoria Public Accounts and Estimates Committee (VPAEC) 2016 *Inquiry into the Impact on Victorian Government Service Delivery of Changes to National Partnership Agreements*, viewed 1 June 2019, https://www.parliament.vic.gov.au/file_uploads/PAEC_58-08_Inquiry_into_the_Impact_on_Victorian_Government_Service_Delivery_of_Changes_to_National_Partnership_Agreements_Qzn8vPr8.pdf

Woolcock K. 2019. *Deeble Issues Brief No. 31: Value Based Health Care: Setting the scene for Australia*, viewed 1 October 2019, https://ahha.asn.au/system/files/docs/publications/deeble_issues_brief_no_31_value_based_health_care_0.pdf

World Economic Forum (WEF) 2017, Value in healthcare: Laying the foundation for health system transformation, viewed 1 October 2019, http://www3.weforum.org/docs/WEF_Insight_Report_Value_Healthcare_Laying_Foundation.pdf

World Health Organization 2016, *Strengthening Health System Governance: Better policies, stronger performance*, viewed 10 October, http://www.euro.who.int/__data/assets/pdf_file/0004/307939/Strengthening-health-system-governance-better-policies-stronger-performance.pdf?ua=1

Contact

Dr Rebecca Haddock
Director
Deeble Institute for Health Policy Research
Australian Healthcare and Hospitals Association

E: deebleadmin@ahha.asn.au
T: 02 6162 0780
Tw: @DeebleInstitute

© Australian Healthcare and Hospital Association, 2019. All rights reserved